

REMARKS

Claims 1-10 are presented for examination. Claims 11-29 have been withdrawn. Claims 1, 2, and 7-10 have been amended in order to more particularly point out and distinctly claim the subject matter to which the applicants regard as their invention.

The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **December 12, 2006**.

Claims 2-6 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Examiner found unclear whether “a hole” in claim 2 is the same as “a hole” in claim 1. As amended, claim 1 clearly defines “a first hole” as being formed in a SiC substrate, and claim 2 clearly defines “a second hole” as being formed in a film formed on the SiC substrate.

Additionally, as amended, claim 9 clearly defines “a HEMT” on line 2 of claim 9 as being the same as the “HEMT” on line 3 of claim 9.

In light of the foregoing reasons, Applicants respectfully request that this rejection be reconsidered and withdrawn.

Claims 1 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Den, et al., (U.S. Patent No. 6,628,053).

Den discloses a carbon nanotube device and manufacturing methods thereof. In particular, Den discloses several carbon nanotube growth processes, including a pyrolysis process using a catalyst; an arch discharge process; a laser evaporation process, and, a process in which a carbon nanotube grows from a catalytic super-fine particle. (Den, cols. 2-3; col. 10, lines 7-13). Specifically, Den teaches forming one carbon nanotube per hole, so that the root of each nanotube

is surrounded by the wall of the hole, and separated from other carbon nanotubes. (Den, col. 5, lines 36-38, 48-50; col. 8, lines 47-55; Figs. 5A-D, 6A-D, 8D, 9C, 12, 15).

Den fails to teach or suggest the present invention because Den's carbon nanotube is separated from the wall of the hole by a space, whereas, in the present invention recited in amended claim 1, 7, 8, and 10, the diameter of the heat conductor (bundle of nanotubes) is the same as the diameter of the hole in which the heat conductor is embedded. FIG. 8D of Den shows string-like "carbon nanotube 24" growing in a hole of "wall 22," and, in particular, shows a space between the hole and "carbon nanotube 24." In contrast, Fig. 1C of the present invention shows "hole 1d" of a "SiC substrate 1" which is embedded with the "heat conductor" (bundle of nanotubes), so that no space exists in the hole between the heat conductor and the wall of the hole.

With respect to the Office Action's "Notice" on page 4 regarding the element "one surface" recited in claim 10, claims 7, 8, and 10 have been amended to clearly define "a first surface" and "a second surface." As amended, claims 7, 8, and 10 do not read on Fig. 8D of Den.

As amended, the present invention recited in claims 1, 7, 8, and 10 is patentably distinct over the cited reference because Den fails to teach or suggest a heat conductor (bundle of nanotubes) embedded in a hole of a SiC substrate so that the diameter of the heat conductor is the same as the diameter of the hole. Furthermore, Den fails to teach or suggest a first heat conductor being formed in a first hole in a first surface of the SiC substrate, a second heat conductor being formed in a second hole in the first surface, and an element being formed on a second surface of the SiC substrate.

In light of the foregoing reasons, Applicants respectfully request that this rejection be reconsidered and withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1-10, as amended, are in condition for allowance, which action, at an early date, is requested.

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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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